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Broadband Technology Opportunities Program
Docket Number: 090309298-9299-01

Subject: Broadband with a Safe Technology

Communication is vital to our country's economic health but some issues that are critical to the safe development of a 21st century infrastructure may not have been considered. Health must be a priority, *unbiased* science must be put before politics, and any investment must be in technology that is safe for everyone.

The health and safety of the population must be the first priority in the process of introducing broadband nationwide.

- 1) Electromagnetic radiation emissions originating from wireless communication devices are already causing severe health problems for many.
- 2) Broadbands over power-lines, now being introduced, are not safe. They give off electromagnetic radiation (electrical pollution, dirty electricity), which enters homes and radiates through the house via the house electrical wiring. This electrical system brings the radiation levels up in the houses and the consummate RF consequences have been shown to be similar to other radiation. (Milham & Morgan, 2008)

Electromagnetic radiation emissions are completely un-natural and present exposures never before experienced by life (animal or plant) on this planet. There is every reason to comprehend they are harmful (Belpomme, Adlkofer, Hardell, & Johansson, 2009).

Non-ionizing electromagnetic radiation is invisible, involuntary, and permeating. It goes through curtains, walls, ceilings and floors. **There is increasingly no place to escape exposure.** Constant exposure becomes overexposure. In constant exposure, health deteriorates.

There is an alternative. Fiber optics can fulfill the goal to broaden broadband communication. Fiber optic cables can travel long distances. They use less power, they are faster than copper wire, they are not affected by water, and they do not emit electrical fields.

I was injured by electro-magnetic radiation and thus became aware of the correlation of technological trigger sources and the unfortunate health consequences. Within nine months after a new cell tower was activated, my health deteriorated and it was linked to emissions from that cell tower. I had to leave our family farm which meant living away from my husband who still farms there. The only documented, proven, repeatable solution to regain health is no exposure. I went to remote areas. It was stressful to abandon home, career and future/dreams in order to avoid exposure. Seven years ago I would not have believed in the seriousness of electro-smog. I am now in the quiet zone in West Virginia (Stewart, 2009), another remote area, safer, but not perfect.

U.S. standards are grossly outdated and do not reflect current scientific research. Protected zones from current technology are urgently needed. Newer technologies (the technologies that emit invisible dirty electricity or electro-smog) will create desperate situations for the sensitive and will likely affect the health of everyone.

The number of ill people is growing. To be forced to live in a Faraday cage, a protection from wireless communication is inhumane. Deterioration of health, from un-natural electromagnetic radiation is torture.

Thank you for your consideration. There can be no greater priority in developing modern communication technologies than the health and safety of all this country's citizens.

Sincerely,

Diane Schou, Ph.D.

Bert Schou, Ph.D.

Attached: (Stewart, 2009)

Belpomme, D., Adlkofer, F., Hardell, L., & Johansson, O. (2009).

Electromagnetic fields on our health, Technologies sans fil: un nouvel enjeu sanitaire <<http://www.robindestoits.org/Colloque-au-SENAT-Electro-hypersensibilite-EHS-Appel-des-scientifiques-europeens-23-03-2009-a777.html>>; Robin Des-Toits: Colloque au SENAT - Electro-hypersensibilité (EHS) : VIDEO de l'appel des scientifiques européens - 23/03/2009.

Milham, S. J., & Morgan, L. L. (2008). A new electromagnetic exposure metric: high frequency voltage transients associated with increased cancer incidence in teachers in a California school. *American Journal of Industrial Medicine*, 51(8), 579-586.

Stewart, S. (2009, February 12). Allergic to electricity in an electronic age. *The Pocahontas Times*, pp. 1B-2B,

Allergic to Electricity in an Electronic Age

Suzanne Stewart
Staff Writer

Imagine living your life without your television, computer, mp3 player, radio, video games, microwave and vacuum cleaner. For Green Bank resident Diane Schou, avoiding these objects is a life long burden.

Schou suffers from electromagnetic hypersensitivity, a condition in which sufferers experience medical symptoms caused by exposure to electromagnetic fields. The illness is not recognized as a disease because the diagnosis relies mainly on self-reported symptoms. There is no specific test that can verify if someone is affected. Also, many of the symptoms are directly related to other medically accepted diagnoses.

Schou first developed the sensitivity around seven years ago on her farm in Iowa.

“By our farm, they built a cell phone tower,” Schou recalled. “It took nine months before I became ill from it and I never suspected that it would be a problem.”

The tower was a U.S. Cellular tower which, for a long time, was the only type of cell phone tower that bothered Schou.

“I didn’t have a problem with AT&T, Sprint, Cellular One or any of the other cell phone companies. It was only U.S. Cellular,” Schou explained.

The frequencies of cell towers are so close, Schou was surprised she could tell the difference in companies. Eventually, as her illness progressed, she became sensitive to the other towers.

To shield herself from the electromagnetic fields, Schou moved into an RV on her farm.

“My husband got the idea of me parking the vehicle in a steel shed and so that’s where I lived for a number of years, inside the steel machine shed in the RV,” Schou said. “He did all the grocery shopping, cooked the food, washed the clothes and made sure I had everything I needed.”

Eventually, Schou left the farm and traveled to safer areas in her RV.



Diane Schou has a faraday cage in her house that she uses to shelter herself from electromagnetic fields. A faraday cage is an enclosure made out of conducting material, or a mesh of such material. The cage blocks out external static electrical fields. It was named after Michael Faraday, a physicist who built one in 1836.

Most times, though, there’s just no avoiding the lights.
“I went to a food co-op meeting because that’s a way of

ing, cooked the food, washed the clothes and made sure I had everything I needed.”

Eventually, Schou left the farm and traveled to safer areas in her RV.

“I started living in national parks and state parks. My husband would come every couple days to see me but of course, I couldn’t go to the store by myself. It was tough,” Schou remembered.

“Fortunately, I had a bunch of books to read from the library so I had something to do. It’s tough living in the remote area,” she continued.

Schou’s nomadic quest for peace had her leaving the RV behind and moving to Europe. She spent time with people in Sweden who also suffered from electromagnetic hypersensitivity.

Once Schou returned to the U.S. for good, after several back and forth trips to Europe, she heard about Green Bank, when she was staying at a national park.

“I was in a national park in South Carolina I think. My son and I were trying to find a safe place,” Schou recalled. “When we found the park, I felt good, but we couldn’t stay overnight because they don’t allow that. I spoke to the park ranger and explained why I wanted to stay and he told me about Green Bank being a quiet zone.”

Because of the National Astronomy Radio Observatory in Green Bank, the area is secure from the admittance of cell phone towers. The closest towers are in Marlinton and Elkins.

Although the observatory does save Schou from the cell



“No, the observatory is not the safest, but why am I here? Because I believe it’s protecting me from cell towers and other things that could come in here.”

towers, she still feels something coming from there.

“When I drive by the observatory, ouch, it hurts. There’s

something here and I wish I could find what it is to make it a cleaner environment here,” Schou explained.

Schou has approached the observatory and asked them what could be causing her reaction. She feels fine at certain locations on the grounds, but something there still causes her pain. She just can’t determine what it is.

“No, the observatory is not the safest, but why am I here? Because I believe it’s protecting me from cell towers and other things that could come in here,” Schou said.

Another item that causes her to be anti-social is a common item that most of us take for granted. Fluorescent lights.

“The senior center has fluorescent lights, the community center has fluorescent lights. It’s limiting what I can do,” Schou said, adding the library and her former church to the list.

“There was a music program at the community center and I took some guests to see them,” Schou remembered. “I had to leave and leave my guest to enjoy the music while I went out to the car.

“They wanted to go to breakfast at the community center and I had to sit out in the car a long distance away,” she continued.

Schou has learned how to time her visits to areas to keep herself protected.

Most times, though, there’s just no avoiding the lights.

“I went to a food co-op meeting because that’s a way of ordering gluten free food,” Schou shared. “It was in the back corner of the library and it was getting toward the evening, so the lights were on. I sat down and started getting a headache, so I moved my chair away from the light. That helped a little but, it wasn’t good enough. I had to be away from it.

“My head was hurting so much, I felt I walked like I was drunk,” she continued. “I wish I had asked somebody to drive me home because it hurt to think about driving and hoping nothing would happen. I’d have to stop and think ‘now what do I do?’ That’s

sort of the reaction I get. It took two full days before I was starting to actually think and do things. That was just from the exposure to fluorescent lights.”

Although her illness has severely altered her life, Schou doesn’t wallow in self pity.

“Someone commented, ‘why wasn’t I crying all the time and depressed.’ It’s because I know other people are living in worse conditions,” Schou explained. “I was living at that time, in the RV. Even though it was primitive, I had a mattress to sleep on.

“Other people are sleeping under lean-tos or sleeping on wooden slats,” she continued. “Because of their chemical sensitivity, they can’t even use blankets, so they’re sleeping without blankets and it’s just really horrible.”

Schou wants to use her expertise to spread knowledge on electromagnetic hypersensitivity. Although she has been silenced before, Schou will continue her fight for awareness.

“I’ve talked to scientists who were being hushed, they were told not to do anymore research in this area or else they would shut the department down,” she said. “They know that something needs to be found out, but if they continue to work, they will lose their jobs.

“What disturbs me, is that research is being done, in just the setting where the data is easy to tweak, so therefore, there would be absolutely no effects,” she continued. “They would put people into a laboratory and expose them to frequencies and they wouldn’t react. Going to the laboratory, they could already be exposed and hurting, so they can’t tell the difference.”

Schou does have a few suggestions for those who feel they may be suffering from electromagnetic hypersensitivity.

“A simple test is, move the clock radio away from the bed to the other side of the room and see if you sleep bet-





Schou and her husband Bert recently attended a square dance at the Dunmore Community Center where the couple took a spin on the dance floor. To make Schou more comfortable, one attendee turned a set of lights off to give her a safe place to sit and socialize with other members of the community. *S. Stewart photo*

away," she continued.

Schou has learned how to time her visits to areas to keep herself protected.

"The library has fluorescent lights, but if I go during the day, usually the lights are off," she said. "If the librarian sees me coming, she will turn the lights off for me, which makes me teary eyed to think they do that."

they may be suffering from electromagnetic hypersensitivity.

"A simple test is, move the clock radio away from the bed to the other side of the room and see if you sleep better at night," she recommended. "Another simple one is change the lights from the CFL (compact fluorescent lamp) lights to the incandescent lights and see if you feel better, or stay away from fluorescent lights and see if you feel better.

"Primarily, make notice where you feel better and where
see Electricity pg 2B

What is Electromagnetic hypersensitivity?

Suzanne Stewart
Staff Writer

If your day consists of sitting in front of a computer for eight hours at work, popping something in the microwave for dinner and watching your favorite shows on television, that migraine and fatigue you battle every night might not be caused by stress.

You could be suffering from electromagnetic hypersensitivity.

EHS, also referred to as electro sensitivity or electrical sensitivity, is a condition in which people experience medical symptoms that appear to be caused by exposure to electromagnetic fields.

Although there are proven cases of affected people, EHS currently is not an accepted diagnosis. Since there is no specific test to determine if someone is affected, EHS is not considered a disease by the medical community.

It is believed the described symptoms are caused by more commonly known diseases, usually in the psychological field.

Symptoms that are linked to EHS include mild to severe headaches, varying

degrees of fatigue, irritation in one or both eyes, skin rashes, ringing in the ears, mild to severe dizziness, nausea with and without vomiting, swelling and itching in the facial area, general weakness, pain that is typically in the muscles or joints, respiratory problems, balance issues, emotional difficulties such as depression, concentration issues, problems with memory and problems with sleep.

The cause of the disorder – electromagnetic fields – is found in many household items and gadgets used in everyday life.

Electromagnetic fields are produced by electrically charged objects. Sufferers can feel the effects of these devices they use from miles away. Items like televisions, microwaves, vacuum cleaners and cell phones are some of the culprits that appear to cause symptoms.

The only cure for EHS is total avoidance of electromagnetic fields and objects that emit electromagnetic radiation. Sufferers remove from their homes all the items that might cause them pain and try to find an "electrically neutral" place to live.

Electricity

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you don't feel better," she concluded.

Although Schou will never be cured of her illness, she has found a place that subdues her reaction to electromagnetic fields.

"I came to Green Bank because that gives me a future," she said, "living in your car is not a future."

A response/**letter to the editor** for paper article in The Pocahontas Times February 19, 2009 on pages 3 and 12:

In The Pocahontas Times, Wellness Section 1B on February 12, 2009 "Allergic to Electricity in an Electronic Age," by Suzanne Stewart. This article asked what is EHS or electromagnetic hypersensitivity and perhaps readers may have wondered where could one learn more about symptoms and effects on health. I suggest:

<http://www.feb.se/index.htm> www.electricalpollution.com

<http://www.es-uk.info/news/index.asp>.

www.wavr.org/blackonwhite and the book The Invisible Disease by Gunni Nordstrom, 2004. These web links to the most current scientific database, to informative websites, and to additional documents for further reading.

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- The Pocahontas Times located at 810 2nd Avenue, Marlinton, WV 24954 U.S.A. Author: Suzanne Stewart sastewart@pocahontastimes.com Editor: pepritt@pocahontastimes.com
 - A request by Diane: Do you know people who repeatedly experienced responses/symptoms to sources of exposure? Second, how have their needs, wants, dreams and life changed? Please have them write to WAVR-electricity, PO Box 99, Green Bank, WV 24944-0099 U.S.A. Email to: Electricity@WAVR.org Names will be kept confidential.